

# I. INTRODUCTION

Colusa Subreach Planning (CSP) will develop a strategy for restoration of the ecosystem along the Sacramento River between the community of Princeton and the City of Colusa in Northern California. Figure 1 depicts the regional location of the area which is referred to as the Colusa Subreach. The objective of this ecosystem restoration is to restore the ability of the environment to support viable populations of native wildlife including those listed under State and Federal Endangered Species Acts. This strategy will be integrated with the flood control system, agriculture and other existing land uses. The Nature Conservancy (TNC) and the Sacramento River Conservation Area Forum (SRCAF) have formed a partnership to conduct the planning program. Funding is provided by the California Bay Delta Authority, commonly referred to as CALFED.

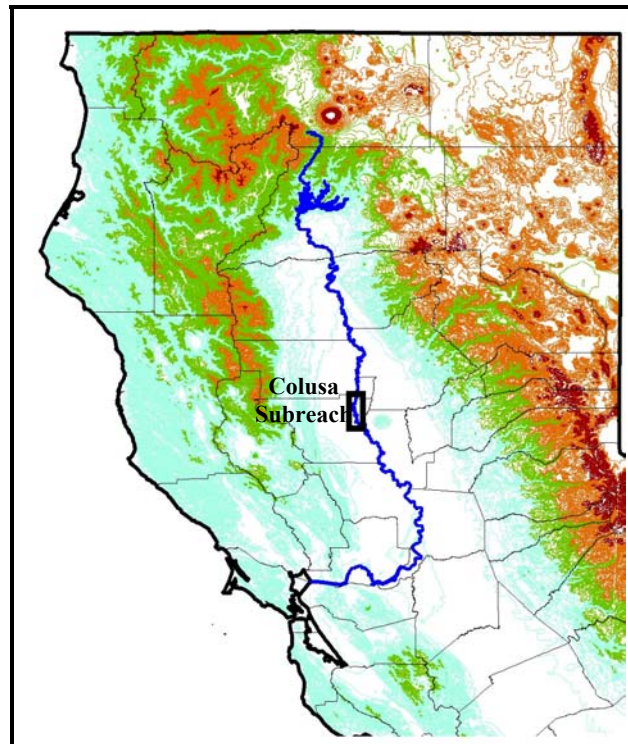


Figure 1. Colusa Subreach Location

The Primary Goal of Colusa Subreach Planning is to:

***Increase citizen stakeholder involvement in determining realistic conservation strategies and projects for protecting and restoring riparian vegetation along the Sacramento River, between River Miles 143.5 and 164.5, compatible with the flood control system and other economic and environmental uses of the floodplain***

This Goal is specified in Recipient Agreement ERP-02-P27, which is the contract for the CALFED grant that supports CSP. Colusa Subreach Planning is grounded in the belief that, through good communication, information sharing and collaborative design, many of the existing concerns regarding the restoration of the riparian ecosystem along the Sacramento River can be resolved.

The Objectives of the planning effort are to:

- a) Ensure an open and inclusive planning process consistent with the SRCAF principles and guidelines with multiple opportunities for input by local stakeholders, agencies and private interest groups.
- b) Collect baseline data and analyze existing data to inform floodplain management and compliment long-term monitoring programs.
- c) Build and calibrate tools (including models) to evaluate the effects of restoration on land management alternatives and flood control infrastructure specific to the Princeton – Colusa Subreach.
- d) Develop design alternatives and identified implementation projects, incorporating ecosystem restoration and related compatible flood protection, recreation and other land use benefits.
- e) Address stakeholder concerns and research priority questions.

#### **A. Purpose of the Report**

This Colusa Subreach Background Report is a basic information source for the subreach planning process. It provides a broad baseline information context for the consideration of the economic, social and ecosystem needs of the subreach. It is intended to be a resource for the Advisory Workgroup and other stakeholders involved in the planning process including local landowners, governments and organizations, recreation and conservation interests and agencies involved in the management of wildlife habitat and the flood control system. It is also intended to be used by SRCAF and TNC staff as a reference work and repository of information regarding the Colusa Subreach Planning Area. Some of the information may also be adapted as part of the Subreach Planning Report, a document that will summarize the planning process and products at the end of the CSP term. This Report is designed to focus on information that will help the Advisory Workgroup and other stakeholders understand and evaluate subsequent plans for the restoration of riparian habitat and other plans and reports that will be developed through CSP.

The Report includes six different types of information. Chapter I provides an overview of Colusa Subreach Planning, the funding source and the project partners. Chapter II describes the entire subreach in terms of land use, ownership and land use controls. Information is drawn from a Geographic Information system (GIS) database that has been developed to support CSP. Chapters III and IV describe the Sacramento River and the ecosystem within the Colusa Subreach. Information is principally drawn from the *Sacramento River Conservation Area Forum Handbook (Handbook)* to tell the story of the river processes, the adaptive responses of plant and animal species and how wildlife has been impacted by changes in the area. A description of the flood control system is also included. Chapter V provides an overview of the local communities and economy as well as a summary of the local concerns that have been identified in regard to habitat conservation. Chapter VI summarizes existing strategies to restore the Sacramento River ecosystem. Finally, Chapter VII describes the tracts that have been identified for potential riparian

habitat restoration in the Subreach. This Subreach Background Report is not intended to reach conclusions or determinations. It is a compilation of information, some preexisting and some newly-developed, that is intended to stimulate thought, discussion and ultimately understanding of ecosystem restoration in the Colusa Subreach.

## **B. Colusa Subreach Planning Overview**

Colusa Subreach Planning addresses a twenty-one mile section of the Sacramento River lying between the unincorporated community of Princeton and the City of Colusa. The subject area is located entirely inside of the flood control levees from River Mile 164.5 on the north, downstream to RM 143.5 on the south. The north boundary is the site of the former Princeton Ferry and the south boundary is the Colusa Bridge. The terms “Planning Area” and “Colusa Subreach” are used interchangeably in this Report to describe the area. It includes approximately 5,466 acres of land with approximately 5094 acres in Colusa County and 372 acres in Glenn County. Figure 2 depicts the Colusa Subreach Planning Area on a 1999 aerial photo.

The Colusa Subreach is an important section of the Sacramento River corridor. The corridor is a rich mosaic of aquatic habitat, oxbow lakes, sloughs, seasonal wetlands and riparian forests within the most diverse and extensive river ecosystem in the State of California. It supports a wide range of wildlife including numerous rare and declining species, critical breeding areas for neo-tropical migrant birds as well as the largest remaining populations of anadromous fish in California. It also supports a vibrant agricultural economy and provides important recreational opportunities to local residents and visitors from other parts of the State and the nation. The Sacramento River is the largest source of water in the State of California and a healthy waterway is essential to the economic and social wellbeing of the entire State.

The Sacramento River has been greatly altered through water supply and flood control activities. Less than ten percent of the natural riparian habitat adjoining the river remains. These changes have contributed to the elimination of some wildlife species and the listing of other species as Threatened, Endangered and of Special Concern under state and federal Endangered Species Acts. At present, these special status species include 43 different anadromous fish, raptors, songbirds and other animals. In response, a wide range of private interests and public agencies have joined together in the effort to restore the riparian ecosystem to a healthy state and provide for stable populations of fish and wildlife.

Over 90 percent of the original riparian habitat area, which averaged about five miles in width, has been converted to agricultural use over the past 150 years. The area nearest the river is primarily planted to orchards and row crops, while rice is the dominant crop in the outer portions of the area. The agricultural lands along the river are an important part of the local agricultural economy, which is the mainstay of both Colusa and Glenn Counties. The communities of Colusa and Princeton and the Sacramento River Flood Control System, composed of levees and two major weirs for flood flow diversion to the Butte Basin, have also been developed within this area. The flood control system is essential to the existing social and economic fabric of Colusa and Glenn Counties. Therefore, it is recognized that reclamation and flood control have had substantial social and economic benefits.



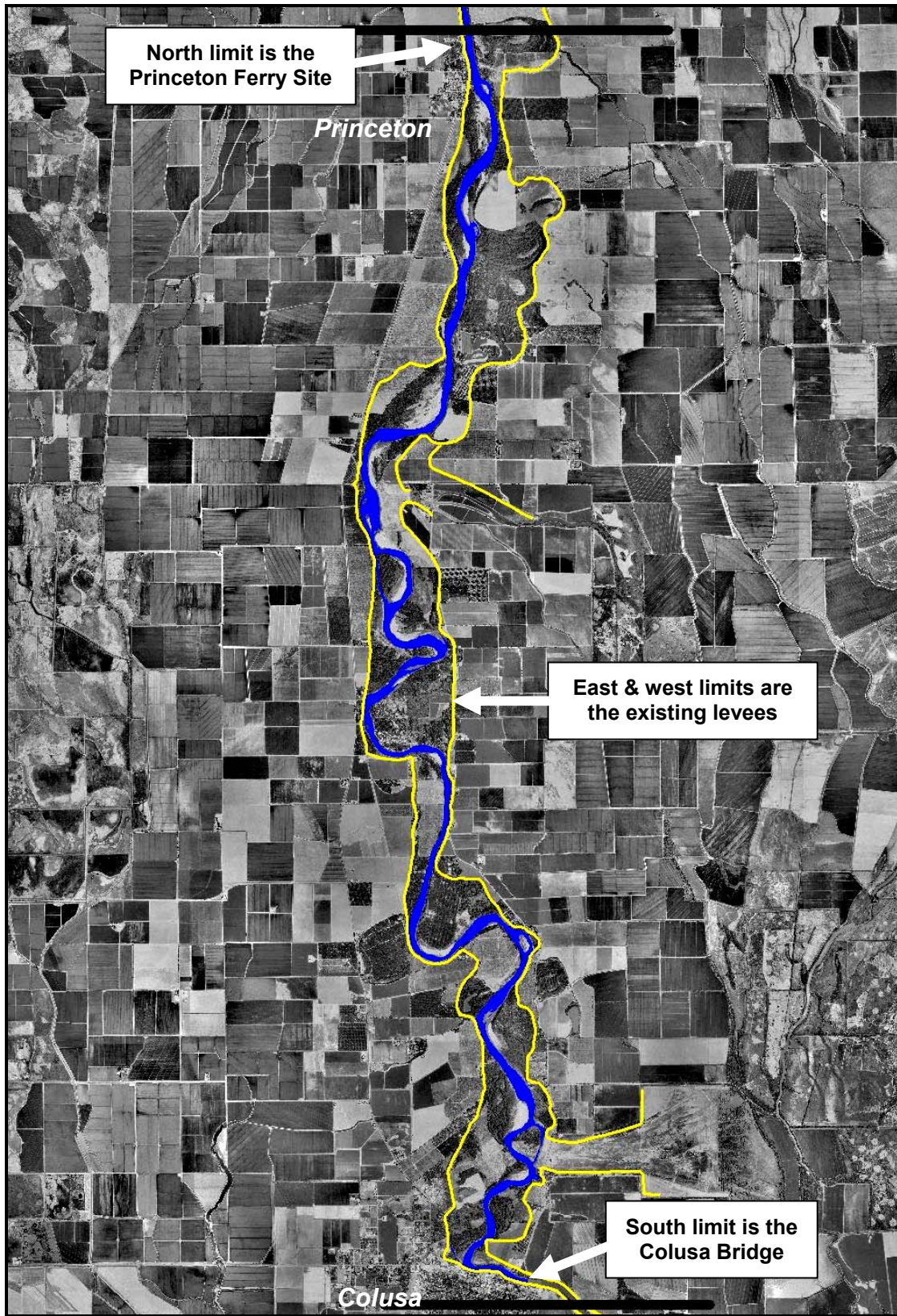


Figure 2. Colusa Subreach Planning Area

A frequent comment along the river has been that landowners and other stakeholders should be involved in the planning of ecosystem restoration projects at the beginning of the process and that their concerns should be incorporated into land use decisions. Speakers at CSP public outreach activities and other forums have asked that conservation projects address the range of concerns that are summarized in Chapter V. Accordingly, Colusa Subreach Planning focuses on early involvement of the wide range of stakeholders in order to address these concerns. For the purposes of CSP, “Stakeholders” are defined as groups or individuals that can affect or will be affected by conservation activities within the floodway of the Sacramento River. This includes landowners in the Subreach as well as other persons outside of the Subreach that are affected by the flood control system, infrastructure within the Subreach and the local economy.

CSP will develop strategies for the restoration of riparian habitat and related flood control and land use considerations. There are seven established Tasks within CSP as summarized below:

**Task 1 – Coordination and Outreach**

SRCAF and TNC will manage an extensive and open public engagement effort that will focus on the following groups:

- A **Steering Committee** composed of SRCAF and TNC representatives that will direct the public engagement process on behalf of SRCAF and TNC.
- An **Advisory Workgroup** composed of the Steering Committee, local stakeholders and representatives of public agencies that manage property along the river. The Workgroup will identify issues and develop understanding of and solutions to those concerns as part of developing plans for restoration and related uses. The Workgroup will also review technical reports and products, proposed plans for restoration and related land uses for consistency with the Goal and Principles of the Sacramento River Conservation Area Handbook.
- **Technical Subgroups** of the Advisory Workgroup will be constituted as needed for various projects to help advise the scientific and technical aspects of CSP.

An experienced, professional facilitator was chosen, from the Common Ground Center for Cooperative Solutions at U. C. Davis, to help plan the public engagement and to directly facilitate meetings of the Advisory Workgroup and other public meetings.

CSP will also reach out to a wide range of stakeholders that may be affected by ecosystem restoration in the Colusa Subreach. The Institute for Social Research at Sacramento State University has also been retained to develop and conduct an initial and final survey of landowners in the Subreach to determine their perceptions and concerns in regard to the restoration of riparian habitat. Outreach to landowners and other stakeholders will also include public meetings, workshops, information presentations to local organizations and newsletters. Additionally, a CSP website has been established within the SRCAF website at [www.sacramentoriver.ca.gov](http://www.sacramentoriver.ca.gov). It features CSP information, documents and announcements regarding all public engagement events.

### **Task 2 – Baseline Assessments**

Baseline Assessments will be conducted to compile and analyze the information base required to support planning of the restoration of riparian habitat, integrated land use and resource planning. It will also help inform the discussion of landowner questions as part of Task 5 through four components:

- This Subreach Background Report to characterize the entire Planning Area and establish Geographic Information System (GIS) base for CSP.
- Baseline Assessment Reports prepared to support restoration planning of specific tracts that are owned by public agencies and TNC.
- Tract Specific Baseline Assessment Reports to characterize soils, vegetation, inundation factors, etc. and develop preliminary restoration recommendations.
- A Small Mammals Report to develop information that may be used to help predict changes in small mammal distribution and abundance that may occur as a result of restoration.
- A Cultural Resources Assessment Report to identify cultural resources on these restoration tracts that should be protected.
- Detailed topographic mapping of the entire Subreach using Light Detection and Ranging (LIDAR) technology to support the design and future evaluation of future projects in the Colusa Subreach.

### **Task 3 – Modeling**

Modeling of the hydraulic impacts of proposed restoration actions will be performed by Ayres Associates in order to determine the potential affect of restoration activities on the integrity of the flood protection system. Peer review at the scoping and results stages is proposed to assist the process.

### **Task 4 – Focal Area Planning**

Restoration plans will be developed for review by the Advisory Workgroup. Other plans related to compatible land uses and flood control will also be developed. This Task has been intentionally left broad to permit flexibility in the identification of planning topics so that the stakeholder input can help give direction to CSP.

### **Task 5 – Landowner Questions**

The facilitator will assist the Advisory Workgroup to identify questions and issues that can be researched to generate information to help reduce uncertainty regarding future restoration activities and/or identify actions that could help resolve issues. Key components of this Task include:

- Determination, by the Advisory Workgroup, of major landowner questions for which research is needed.
- Development of scopes of work for this research (to be reviewed by the Advisory Workgroup) to address these concerns.
- Contracted research projects to address these identified landowner questions.

### **Task 6 and 7 – Project Management, Administration and Closure**

CSP will involve requisite accounting and record keeping, subcontracts management, preparation of quarterly, annual and final reports. A key component of this Task will be a Subreach Planning Report, which will synthesize the results of CSP and identify a strategy for future restoration and related actions. The Advisory Workgroup will help to determine the scope of this

Report and review the draft for consistency with the Goal and Principles of the *Sacramento River Conservation Area Handbook*.

Colusa Subreach Planning is funded through the Ecosystem Restoration Program of the CALFED Bay-Delta Program pursuant to Recipient Agreement No. ERP-02-P27. Total funding authorization is \$1,488,009 and the source of the funds is Proposition 204 which was approved by the voters of California on November 5, 1996. As a contractor and subcontractor, TNC and SRCAF are responsible to the California Bay-Delta Authority for management of CSP.

CSP is scheduled per the CALFED grant to occur over a three-year term, ending in April of 2007. The Advisory Workgroup will meet and other public outreach efforts will occur during each of the three years. Highlights of the CSP schedule are:

**Year 1** (April 2004 to April 2005)

- Plan the public engagement activities
- Initiate Baseline Assessment studies
- Prepare the Subreach Background Report
- Convene Advisory Workgroup and identify landowner questions and research
- Conduct initial landowner survey, public meeting, workshop, presentations

**Year 2** (April 2005 to April 2006)

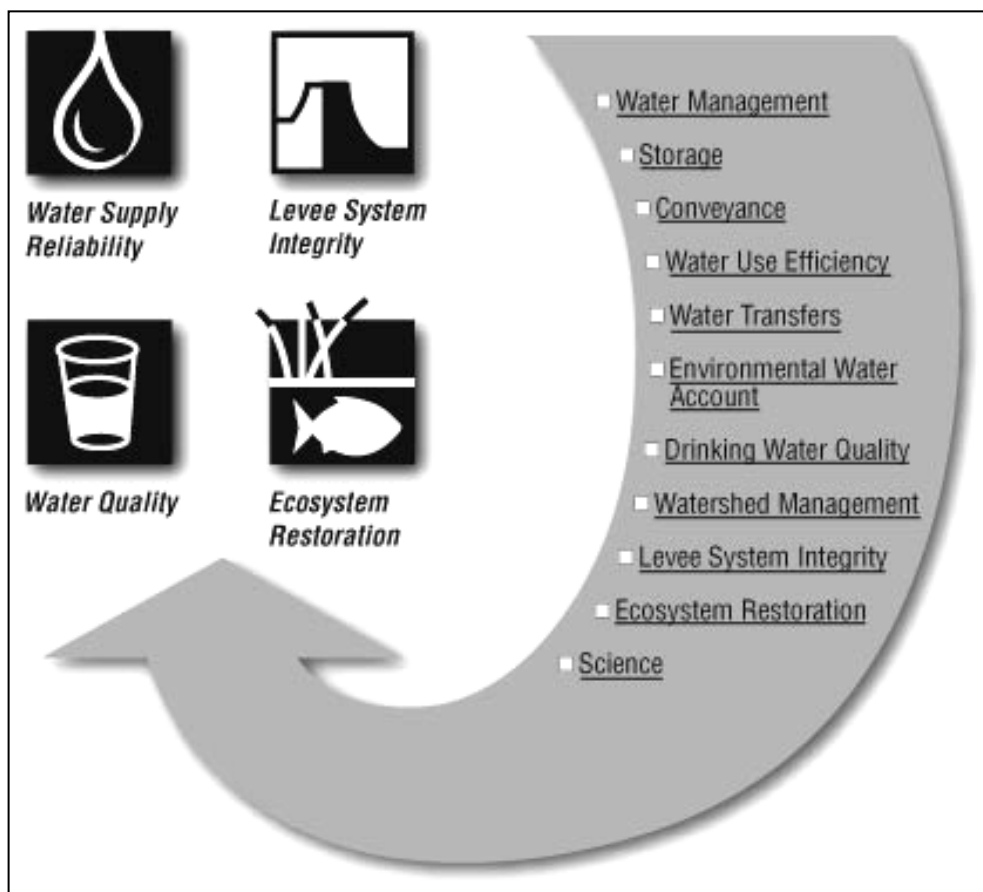
- Initiate landowner question research
- Initiate focal area planning projects
- Prepare and review draft restoration plans
- Initiate hydraulic analysis of draft restoration plans
- Conduct midterm public meeting, workshop and presentations

**Year 3** (April 2006 to April 2007)

- Review and complete land owner question research
- Review and complete focal area planning
- Review and complete hydraulic analysis
- Review and complete restoration plans
- Conduct final landowner survey, public meeting, workshop, presentations
- Prepare the Subreach Planning Report

## **C. California Bay Delta Program**

The CALFED Bay-Delta Program was established to be a balanced, comprehensive approach to reduce conflicts over limited water supplies and to address the Program's four objectives of Water Supply Reliability, Water Quality, Levee System Integrity and Ecosystem Restoration through 11 major program elements, as depicted on Figure 3. The California Bay Delta Authority manages the joint state and federal program commonly known as "CALFED". The California Bay-Delta Authority oversees the 23 state and federal agencies working cooperatively through the CALFED program to improve the quality and reliability of California's water supplies while restoring the Bay-Delta ecosystem. The California Bay-Delta Act of 2003 established the Authority as the new governance structure and charged it with providing accountability, ensuring balanced implementation, tracking and assessing Program progress, using sound science, assuring public involvement and outreach, and coordinating and integrating related government programs. Additional information is available online at the California Bay Delta Authority website at [www.calwater.ca.gov](http://www.calwater.ca.gov).



**Figure 3. Resource Management Objectives of the Bay – Delta Program**

*Illustration from the California Bay-Delta Authority website.*

In August 2000, the Bay-Delta Program issued a Record of Decision that set forth a 30-year plan to address ecosystem health and water supply reliability problems in the Bay-Delta watershed. The document laid out specific actions and investments over the first seven years (Stage 1) to meet Program goals. It also described a strategy for implementing the plan and identified complementary actions to be pursued by the Bay-Delta agencies. Included within that strategy are plans to restore the ecosystem of the Sacramento River. The *Ecosystem Restoration Program Plan Volume II Ecosystem Management Zone Visions*, which is available online in the CALFED website, details the actions that have been identified to achieve ecosystem restoration for the Sacramento River including the Colusa Subreach.

#### **D. Sacramento River Conservation Area Forum**

The Sacramento River Conservation Area Forum is a nonprofit corporation that adopted the following mission statement in 2004:



***The Sacramento River Conservation Area Forum brings communities, individuals, organizations and agencies together along the Sacramento River from Keswick to Verona to make resource management and restoration efforts more effective and sensitive to the needs of local communities. The Forum supports restoration done well, and serves as a forum for sharing, a facilitator of solutions, and a partner for projects that protect both the natural values of the Sacramento River and the communities it runs through.***

The Sacramento River Conservation Area (SRCA) extends along 222 miles of the Sacramento River, from its confluence with the Feather River near Verona to Keswick Dam just north of Redding. The SRCA includes land in Shasta, Tehama, Butte, Glenn, Colusa, Sutter and Yolo Counties. The Colusa Subreach lies in the lower half of the SRCA and it includes land in both Colusa and Glenn Counties.

The SRCA is a product of the effort initiated through State Senate Bill 1086 in 1986. That legislation created an Advisory Council that completed the *Upper Sacramento River Fisheries and Riparian Habitat Management Plan* in 1989. The Riparian Habitat Committee of the Advisory Council also conducted an extensive public process that resulted in the completion of the *Sacramento River Conservation Area Handbook* in 1999. The *Handbook* established a Goal and the Basic Principles and Management Guidelines for the SRCAF. The *Handbook* was developed as the basis for interagency cooperation and agreement on programs within the SRCA. The *Sacramento River Conservation Area Handbook Forum, as updated in 2003*, specifies the following overall Goal for the SCRAF:

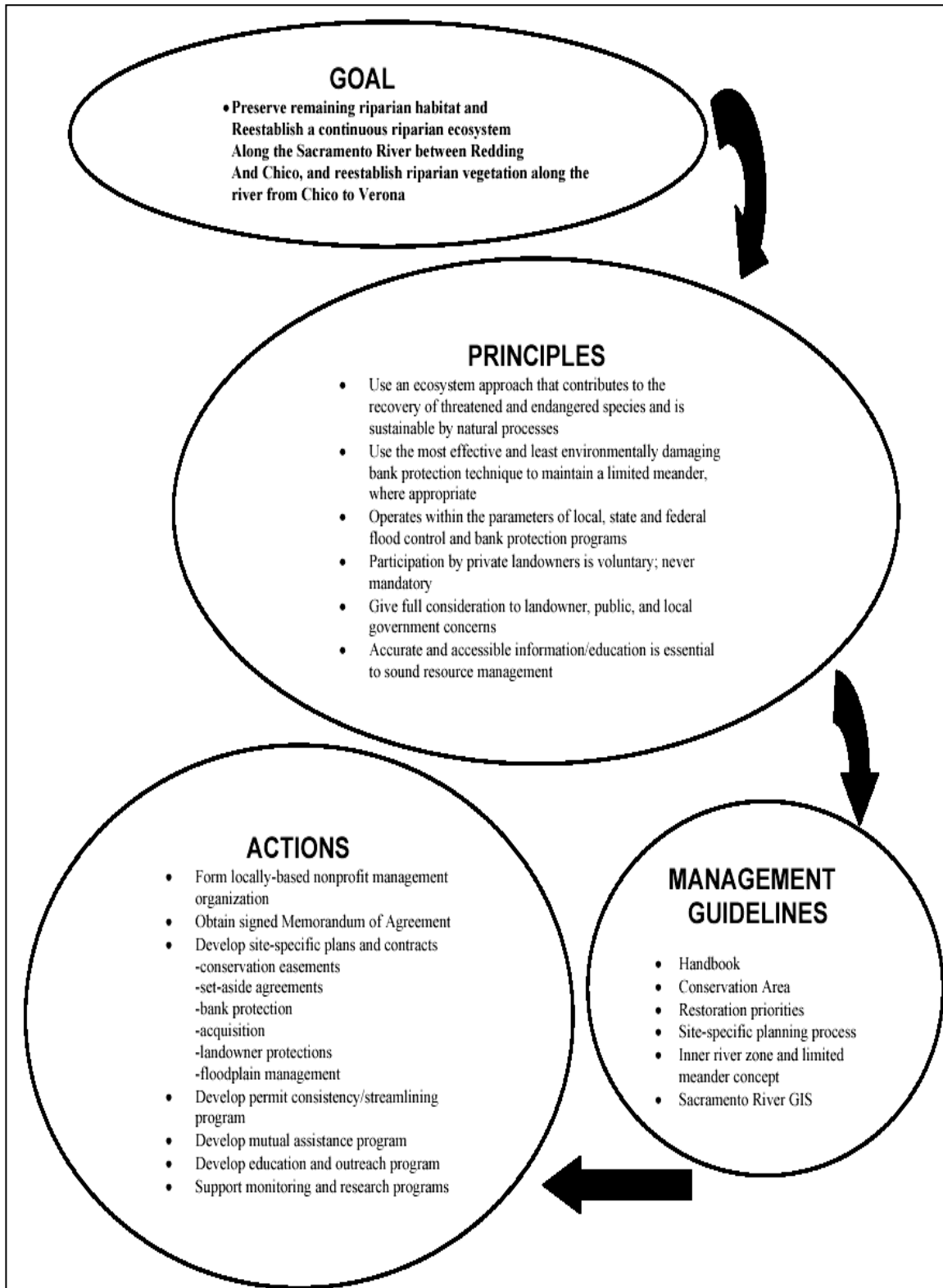
***Preserve remaining riparian habitat and reestablish a continuous riparian ecosystem along the Sacramento River between Redding and Chico and reestablish riparian vegetation along the river from Chico to Verona.***

This Goal is supported by a set of Principles, Actions and Management Guidelines that detail a process to reach the Goal. Figure 4 depicts the structure of the SCRAF in a diagram from the *Handbook*. The *Handbook* also provides a detailed discussion of the dynamic river processes and the resulting habitat communities. The *Handbook* is available online at the SRCAF website ([www.sacramentoriver.ca.gov](http://www.sacramentoriver.ca.gov)) and it should be consulted for additional information regarding the SRCAF. Consistency with the Goal and Principles of the *Handbook* was also chosen as the review standard for products of the Colusa Subreach Planning when the project was first conceived in 2001.

## **E. The Nature Conservancy**

The Nature Conservancy is a nonprofit corporation that has been active in conservation activities in California and along the Sacramento River for many years. The Mission of The Nature Conservancy is:

***To preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.***



**Figure 4. The Structure of the Sacramento River Conservation Area Program**  
*Illustration from the Sactamento River Conservation Area Forum Handbook.*

The Sacramento River corridor has been identified by TNC as well as many other private, academic and public entities as an unusually diverse ecosystem; a priority for plants and animals, including humans. TNC's approach to conservation along the Sacramento River is designed to accommodate both the human uses of the river (such as agriculture, flood control and recreation) and the natural resource benefits provided by the river.

The Nature Conservancy is one of many organizations and agencies working to restore the Sacramento River ecosystem. TNC works in partnership with landowners, the SRCAF, other local organizations and local, state and federal government agencies to implement practical conservation strategies in several key ways:

- Developing the best available scientific information to help guide conservation
- Planning for habitat management and restoration in concert with stakeholders
- Acquiring land for conservation; only from willing sellers
- Restoring native riparian habitat utilizing local agricultural contractors

Working with the SRCAF, TNC has developed subreach planning as a tool to involve local interests and other stakeholders in the planning of conservation actions along the Sacramento River. The overall Colusa Subreach Planning effort is managed from the TNC office at 500 Main Street in Chico, California. Further information regarding TNC is available online at [www.tnc.org](http://www.tnc.org).

## **E. Public Engagement Plan**

TNC and SRCAF initially agreed to form a partnership to conduct Colusa Subreach Planning in the summer of 2001 when the application for project funding was first prepared. Both entities recognized that there were concerns with habitat restoration that required open and cooperative interaction with all stakeholders. This joint agreement was further detailed the *Memorandum of Agreement Between the Sacramento River Conservation Area Forum and the Nature Conservancy Regarding the Colusa Subreach Planning Project (Memorandum of Agreement)*, in June of 2004. The *Memorandum of Agreement*, contained in Appendix A, specifies the shared commitments of both entities related to:

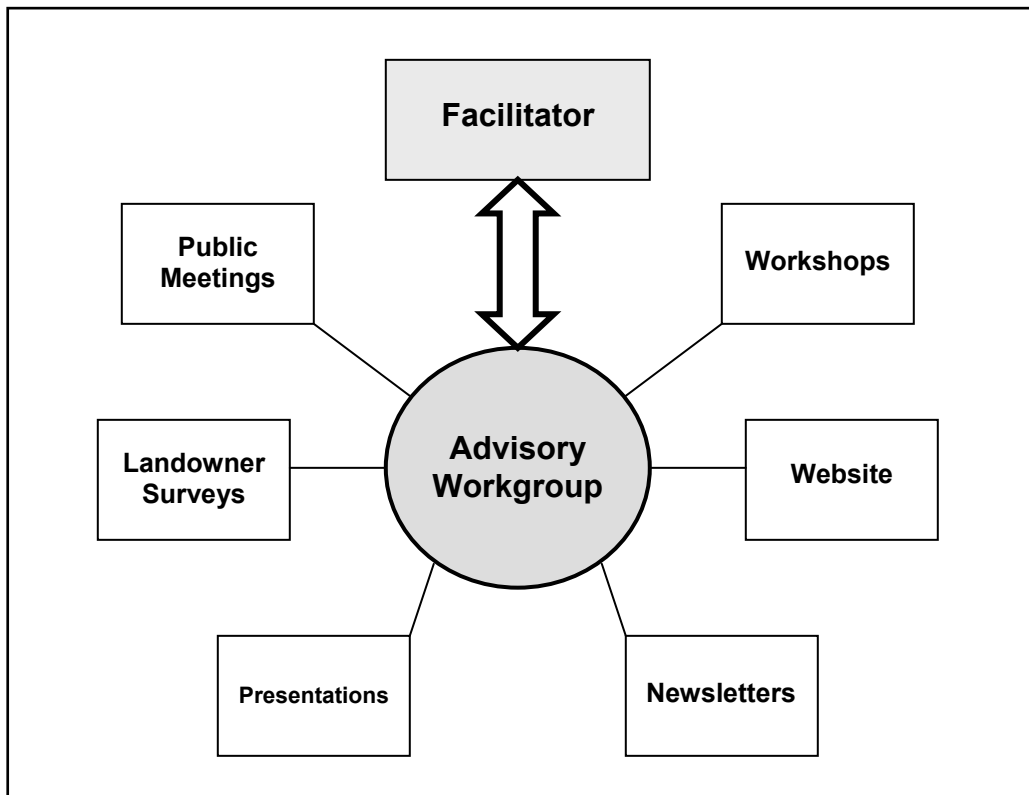
- The Goal and Objectives of CSP
- The responsibilities of both SRCAF and TNC
- Provision for a Steering Committee to direct the public outreach
- Provision for an Advisory Workgroup to provide representative stakeholder input

The *Public Engagement Plan for Colusa Subreach Planning*, contained in Appendix B, details plans for the various components of public outreach that will be a part of CSP. The Plan was developed with the project facilitator and approved by the Steering Committee. It is a blueprint to "Increase stakeholder involvement in realistic conservation strategies..." as stated in the CSP Goal. It describes multiple strategies and tools to engage a wide range of stakeholders in the planning process.

The central focus of the *Plan* is the Advisory Workgroup. The Workgroup includes representatives of local government, organizations and interest groups as well as representatives of the SRCAF and public agencies that are involved with conservation and flood control along the river. The membership of the Advisory Workgroup is noted on the inside cover of this Report. The following mission statement was adopted by the Workgroup at their initial meeting, on November 3, 2004.

***To cooperatively determine practical strategies for conservation and restoration of wildlife habitat within the Colusa Subreach that minimize adverse economic impacts, are compatible with agriculture and local community needs, integrate with recreation needs and protect the integrity of the flood control system.***

Other stakeholders will be engaged in Colusa Subreach Planning through landowner surveys, a website, public presentations, public meetings, workshops and newsletters as depicted in Figure 5.



**Figure 5. CSP Public Engagement Program**

In conjunction with the initial commitment of TNC and SRCAF to the establishment of the partnership in 2001, TNC additionally committed to delay all habitat restoration activity within the Subreach until it could be planned as part of CSP. The intent was that all the restoration projects that were proposed at that time would be planned and considered comprehensively as part of the Colusa Subreach Planning process. It was anticipated that the ecosystem restoration strategy to be developed as part of CSP would also provide direction for other public access or habitat conservation projects that, while not planned at this time, might occur in the future.